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# Aligning Information Systems Security in Higher Educaiton With Industry Needs

Gelareh Towhidi
*University of West Georgia*, gtowhidi@westga.edu

Jeannie Pridmore
*University of West Georgia*, jpridmor@westga.edu

Brad Prince
*University of West Georgia*, bprince@westga.edu

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**Gelareh Towhidi**
University of West Georgia
gtowhidi@westga.edu

**Jeannie Pridmore**
University of West Georgia
jpridmor@westga.edu

**Brad Prince**
University of West Georgia
bprince@westga.edu

## ABSTRACT

Organizations have become especially vulnerable to security threats to their most important asset, information. As a result, information security (ISec) has become one of the most demanded skills of Information System (IS) graduates and therefore is of critical importance for ISec curriculum. However, there is still a big shortage in skilled ISec graduates that meet industry needs. Organizations are facing difficulties filling security analyst positions, and it is predicted there will be a global shortage of two million cyber security professionals by 2019. Previous research stresses that IS curriculum need to be redesigned to meet the business and industry needs and better prepare IS graduates for future careers (Lee and Han 2008; Tan et al 2018). This study provides a framework for how to use backwards course design to develop an Information Systems Security course that will align with industry needs. The proposed framework uses the three main stages of backwards course design including, identifying desired results, determining acceptable evidence, and planning learning experiences and instruction. In stage one, course educational outcomes and learning goals are redesigned to align with the industry needs. In stage two, all the course evaluations criteria and assessment methods are designed to support the updated learning objectives, and in stage three, instructional methods and learning activities are redesigned. We use the theoretical framework to redesign an IS security course at a medium sized business school in the southeastern United States to align with industry needs by incorporating the current and future security needs of US companies. To address the security industry needs, we research current security trends and needs, future security plans and needs, and required and preferred qualifications of job candidates by US security companies. Multiple interviews are done to survey IS security experts to examine the current and future industry needs. We will compile our research findings to create the outcomes and learning goals. Then we will develop our assessments and course actives to support the learning goals and outcomes. The final redesigned course along practical implications are presented.

### Keywords

Information Systems Security, Backward Course Design, Higher Education, Industry

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